

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/97

Date Received: 10/23/97

Project: Metro Self Monitor, PO# M58829

Date Samples Extracted: 10/28/97

Date Extracts Analyzed: 10/30/97

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M58829	0.59	0.37	0.54	0.12
Method Blank	<0.05	<0.05	<0.05	<0.05

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**QUALITY ASSURANCE RESULTS
FOR TOTAL METALS BY
INDUCTIVELY COUPLED PLASMA (ICP)
(METHOD 6010)**

Laboratory Code: 710120-01 (Duplicate)

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>Relative Percent Difference</u>	<u>Acceptance Criteria</u>
Chromium	mg/L (ppm)	0.59	0.57	3	0-20
Copper	mg/L (ppm)	0.37	0.38	3	0-20
Nickel	mg/L (ppm)	0.54	0.52	4	0-20
Zinc	mg/L (ppm)	0.12	0.13	8	0-20

Laboratory Code: 710120-01 (Matrix Spike)

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>Sample Result</u>	<u>% Recovery</u>		<u>Acceptance Criteria</u>	<u>Relative Percent Difference</u>
				<u>MS</u>	<u>MSD</u>		
Chromium	mg/L (ppm)	2.5	0.59	109	103	80-120	6
Copper	mg/L (ppm)	2.5	0.37	108	104	80-120	4
Nickel	mg/L (ppm)	5	0.54	107	102	80-120	5
Zinc	mg/L (ppm)	2.5	0.12	106	104	80-120	2

Laboratory Code: LCS

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>% Recovery</u>		<u>Acceptance Criteria</u>	<u>Relative Percent Difference</u>
			<u>MS</u>	<u>MSD</u>		
Chromium	mg/L (ppm)	2.5	114	109	80-120	4
Copper	mg/L (ppm)	2.5	115	110	80-120	4
Nickel	mg/L (ppm)	5	115	109	80-120	5
Zinc	mg/L (ppm)	2.5	114	108	80-120	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

November 6, 1997

DUPLICATE COPY

INVOICE #97ACU1106-1

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project Metro Self Monitor, PO# M58829: Results of testing requested by
Gerry Thompson for material submitted on October 23, 1997.

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due

\$ 65.00

FEDERAL TAX ID #(b) (6)

PS # 710120

KT

AI

10.23.97

125

FRIEDMAN & BRUYA, INC.
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e-mail: fbi@isomedia.com

November 6, 1997

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on October 23, 1997 from your Metro Self Monitor, PO# M58829 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Kurt Johnson
Chemist

Enclosures
ACU1106R.DOC